

REMARKS/ARGUMENTS

Claims 1 and 3-16 are currently pending and stand rejected by the Examiner. The above amendments correct minor errors in the claims of a non-substantive nature and hence no new matter is being added. Accordingly the entry of these amendments appears proper and is courteously solicited.

Initially the Examiner has objected to claim 16 as lacking proper antecedent basis for all claims from which claim 16 depends. As suggested by the Examiner, the Applicants have amended claim 16 to depend only from claims 5 to 15 to address this problem.

Claim 4 is rejected under 35 USC § 112 as being indefinite due to the use of “interpolymer” in the “wherein” clause of claim 1 which is inconsistent with the use of “homopolymer” as used in claim 4. Claim 1 has been amended so that the “wherein” clauses matches clause “(A)” in its recitation of “polymer”. Accordingly, this rejection is now believed to be moot.

Claims 1, 3, 4, and 16 were then rejected by the Examiner under 35 USC § 103 as being unpatentable over US 4,461,873 to Bailey et al. Claim 16 no longer depends from Claim 1, and so it is believed that this rejection no longer applies to claim 16. Claim 1 in the present application is a film having a layer made from a polymer composition that has at least two components. Component A is a high molecular weight component that is required to be a homogeneously branched component. This branching is indicated by an Mw/Mn value of from 1.5 to 3, which is also a recitation in claim 1. The Examiner has indicated that Bailey recites a polymer having the recited Mw/Mn as it states in Table 1 that the high molecular weight component should have an Mw/Mn of “<10”.

A disclosure of “less than 10” covers both homogeneous and heterogeneous branching, and so does not disclose either “homogeneously branched polymer” or the numerical range of 1.5 to 3. In fact, Bailey teaches more specifically that its high molecular weight component has a preferred Mw/Mn of from 4-9 (see column 3 Table 1), and is preferably produced with high productivity catalysts such as titanium/magnesium catalysts used in conjunction with organoaluminum cocatalysts (column 3, lines 56-58). Both of these statements are indicative of heterogeneously

branched polyethylene and thus show that Bailey does not teach or suggest the limitations in claim 1. As claims 3 and 4 depend from Claim 1, they too require the high molecular weight component to be a homogeneously branched component, an element which is not taught by Bailey. Accordingly, the Applicants respectfully request that the rejection of claims 1, 3, and 4 be withdrawn.

Next, the Examiner has rejected claims 5-16 under 35 USC § 103 as being unpatentable over US 4,536,550 to Moriguchi et al. Claim 5 and Claim 6 both contain recitations that go to the structure of the polymer. In claim 5 it is recited that the composition contains a fraction having a molecular weight of 1,000,000 or greater as determined using GPC-LS which is at least 2.5% but no more than 20%. In claim 6, it is recited that the composition contains a fraction having a molecular weight of 10,000 or less as determined using GPC-RI which is at least 10% but no more than 25%. Claim 7 requires both of these limitations. Applicants wish to emphasize that there are two different aspects in these claims with regard to the molecular weight. First is the numerical value (i.e. greater than 1,000,000 for claim 5 and less than 10,000 for claim 6). The second aspect is the amount of material which meets that numerical value (i.e. 2.5 to 20% in claim 5 and 10-25% in claim 6).

The applicants have found that for the water vapor transmission and improved processability as shown in Table 2, it is necessary to have a certain amount of material having Mw above 1,000,000 and a certain amount of material having Mw less than 10,000, without too much of either. As reflected in the claims, too much of either the material having Mw less than 10,000 or the material having an Mw of more than a million is as problematic as not having enough. At best, Moriguchi teaches broad ranges of molecular weights which, if certain assumptions are made with respect to molecular weight distributions, may overlap somewhat with the present claims. However, Moriguchi does not suggest any advantage from working in the specific ranges recited in the present claims, and specifically does not suggest the improved combination of processability and vapor transmission rates as shown in Table 2.

Moriguchi, does not give any teaching or guidance as to the distribution of Mw, stating only a range of average Mw for each component. Thus, although Moriguchi states at column 2, line 60, that its low molecular weight component has a molecular weight from 5,000 to 90,000, there is no specificity as to how the molecular

weight should be distributed. For example, if the average molecular weight is at the lowest end of the range (i.e. 5,000) a considerable amount of the component may still be over 10,000. Then, either component B or component C may also have some portion with a molecular weight less than 10,000. Finally, the variance in the amount of component A in the final mixture (which can vary between 7.5% and 63%), makes it impossible to say whether the compositions of Moriguchi would fall within the claimed range. This argument applies equally for the high molecular weight fraction as recited in claim 5. Thus Moriguchi does not suggest the specific ranges set forth in the present claims, and certainly does not suggest that there would be any advantage to doing so.

Accordingly, as the art of record does not teach or suggest the claimed invention, a notice of allowance of the amended claims is courteously requested.

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